

65-8,2

HEATING THE MANUFACTURING PLANT

BY


"The Webster"

SYSTEM



HEATING THE MANUFACTURING PLANT

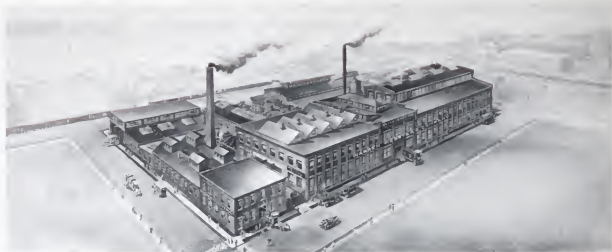
The economical use of steam
in heating buildings by
The Webster System



WARREN WEBSTER & CO.,
ESTABLISHED 1888

CAMDEN, N.J.
INCORPORATED 1895

HEATING THE MANUFACTURING PLANT



WARREN WEBSTER & CO., Main Office and Factory, Camden, N. J.

Established 1888

Representatives in Principal Cities of the United States, Canada and London, England

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

The Webster Vacuum System



THE Webster Vacuum System of Steam Heating is a method of circulating exhaust steam, live steam, or a combination of the two, to obtain not only the utmost efficiency, but the greatest economy.

We manufacture a line of appliances for heating and power plant equipment, and through an experience of twenty-seven years have learned how these should be applied to give the best results.

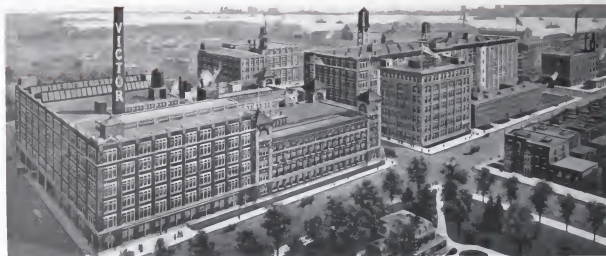
The appliances which we manufacture are sold as a complete System, as we are interested in the results of the apparatus as a whole. Our knowledge and experience are brought to bear on each problem; our Inspection Department follows up the work during progress to insure its proper installation; and finally, our simple yet concise instructions insure proper operation.

When the Webster System is installed and operated as we direct, we guarantee certain results. We will cheerfully furnish a written guarantee, to cover any specific case, and with our

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*** VICTOR TALKING MACHINE CO., Camden, N. J.

Ballinger & Perrot
Architects

A. C. Wood
Consulting Engineer

Camden Heating Co.
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

financial standing and business reputation this guarantee becomes virtually an "Insurance Policy" on your heating system.

The Webster System has been installed in more than 7,000 buildings during the past twenty-seven years, of this number more than 1,600 in manufacturing plants. During this period of years we have not only improved the methods of application, but have developed and perfected the appliances required. The Webster System of to-day is therefore the most up-to-date system that could be devised.

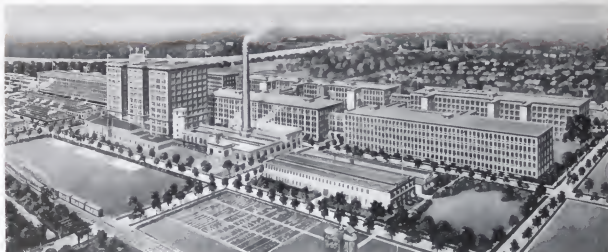
The Webster System is peculiarly adapted to the heating problem of the manufacturer, whether his factory is housed in a single building or in an extended group of buildings.

The illustrations show but a few of the many manufacturing plants satisfactorily heated by the Webster System.

NOTE.—Where Webster Feed Water Heaters as well as the Webster System have been installed, the illustrations are marked *.
Where Webster Air Conditioning Apparatus as well as the Webster System has been installed, the illustrations are marked * *.
Where Webster Feed Water Heaters and Webster Air Conditioning Apparatus as well as the Webster System have been installed, the illustrations are marked * * *.

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NATIONAL CASH REGISTER CO., Dayton, Ohio

McKim, Meade & White
F. M. Andrews
Architects

Nygren, Tenney & Ohmes
Consulting Engineers

Peck, Anderson & Peck
F. W. Clegg Co.
Jos. McWilliams Co.
M. J. Gibbons & Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Heating the Manufacturing Plant

THE heating by steam of buildings used for manufacturing purposes may be divided into two classes :

EXHAUST STEAM HEATING.

LIVE STEAM HEATING.

The first class embraces all plants which generate high pressure steam for power and lighting service, and which therefore have a quantity of exhaust steam available, partly or wholly sufficient for the heating requirements. When properly designed, the "last ounce" of exhaust steam is utilized and live steam is admitted to supplement the exhaust steam only in severe weather, or when the engine load is light, its admission being automatically controlled.

Extended groups of buildings, with few exceptions, have their own power plants.

Of late years, due to the exploitation of power and lighting service from central stations, more especially in the larger cities, there has been an increase in the number of owners of buildings who have preferred to purchase power and lighting service at measured rates, and in such

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WESTINGHOUSE ELECTRIC & MANUFACTURING CO., East Pittsburgh, Pa.

Thomas Rodd
Architect

P. F. Maginn & Co.
Heating Contractors

WARREN WEBSTER & COMPANY

CAMDEN N.J.

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cases the heating of the building is accomplished by live steam from low-pressure heating boilers.

With such buildings the heating is a direct expense, and it is therefore equally if not more important to have a heating system that is economical, as well as efficient, in operation.

Our thorough knowledge of the conditions and problems in this field, and the wide variety of Webster Appliances, give the Webster System a flexibility of application that adapts it to any heating plant.



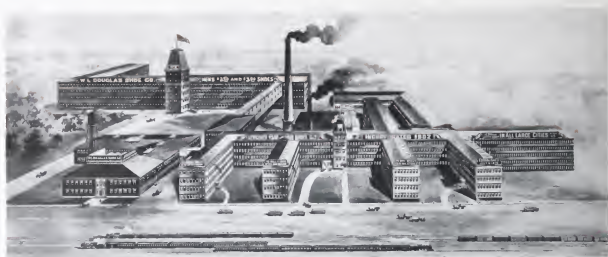
* CROWN CORK & SEAL CO., Baltimore, Md.

Crook-Kries Co.
Heating Contractors

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DOUGLAS SHOE CO., Brockton, Mass.

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Saving Exhaust Steam Means Saving Dollars

THE manufacturer who is now wasting exhaust steam which might be put to profitable use in heating, is actually throwing away money, since each pound of exhaust steam not so utilized requires a pound of live steam to be generated, at the expense of fuel, to do the work.

In these days of specialized activities, when large investments are made to decrease the cost of the processes of manufacture of the finished product, there is probably no single department that will yield as high a percentage of return or dividend upon investment, as the power plant. Considered as a manufacturing department it should be designed to turn out its finished product—power—with the least expense. It is probably the only department in the business where the by-products can be used in the same business to effect such large economy.

Before the exhaust steam can be utilized, however, the cylinder lubricant must be removed. We manufacture Webster Oil Separators (in a variety of designs) for this purpose.

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HEATING THE MANUFACTURING PLANT



BORLAND MANUFACTURING BUILDINGS, Chicago, Ill.

Pierce, Richardson & Nailer
Consulting Engineers

Frost & Granger
Architects

L. H. Prentice Co. and Kehm Bros. Co.
Heating Contractors

WARREN WEBSTER & COMPANY

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

The exhaust steam may—and should—also be used in pre-heating the boiler feed-water, which may be done by means of a Webster Feed-water Heater.

This Heater is designed to act as a receiver for the heating system returns, and other suitable pure "drips," thus becoming, in such instances, part of the Webster System of Steam Heating. (Where consideration is given Feed Water Meters we are in a position to furnish such apparatus.)

For steam heating plants of this character, the Webster Vacuum System is well adapted.



AMERICAN HIDE & LEATHER CO., Lowell, Mass.

Carroll Bros.

Heating Contractors

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* CHENEY BROTHERS, South Manchester, Conn.

G. H. Miller
Consulting Engineer

James H. Merritt & Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

The Webster Vacuum System of Steam Heating

THIS system requires, for its operation, a mechanically operated exhausting apparatus. In exhaust steam systems, a steam driven vacuum pump is used, and the exhaust steam from the pump is utilized in the heating system, so that the cost of its operation is practically nothing

The pump is of relatively small size. Its only function is to partially exhaust the air from the return piping of the system. It does not have to "pull" the water of condensation, except when physical conditions make "lifts" necessary; that is, the return of condensation from points below the suction valves of the pumps.

The pumps are protected by Webster Suction Strainers and automatically controlled by Webster Vacuum Governors.

As the air is partially exhausted from the return piping and radiators, the steam flows naturally into the lower pressure, making it possible to circulate and distribute the exhaust steam to the furthestmost points, with little or no back-pressure.

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KOKEN BARBERS' SUPPLY CO., St. Louis, Mo.

William A. Lucas
Architect

Urbauer-Atwood Heating Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

This is a very essential point, as back pressure means added resistance which the engines must overcome, and hence adds to the power cost.

With the Webster System steam has been successfully circulated to points 1,500 to 1,800 feet distant from the source of steam supply with negligible back pressure.

The radiation, or heating surface, is made more efficient as the air is withdrawn by the vacuum pump, which prevents air binding and does away with objectionable air valves. The water of condensation flows naturally into the return piping and falls to the lowest point of the system, from which it is handled by the pump and becomes available as boiler feed.

Steam is retained within the heating surface until it is condensed, as automatic Webster Radiator Traps on each heating unit and drip point check the steam but permit the continuous escape of air and free drainage of the condensation.

In addition to the saving of exhaust steam, which alone makes the Webster Vacuum System a profitable investment, there is the saving of the condensed steam, which being practically distilled water, is in a highly fit state for boiler use, and renders unnecessary the purchase or

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* WOODSIDE COTTON MILLS, Greenville, S. C.

J. E. Serrine
Architect and Mill Engineer

General Fire Extinguisher Co.
Poe Hardware & Supply Co.
Heating Contractors

WARREN WEBSTER & COMPANY

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

pumping of fresh make-up water, except in the limited quantity required to offset possible losses.

When the fresh water contains scale-forming elements, the saving of the heating system returns becomes more than usually profitable, as the boilers are kept in a more healthy condition.

Added to the above economic advantages of the Webster System are others which relate more especially to efficiency:

- 100 per cent. heating efficiency of radiators and coils;

- Noiseless operation;

- Control of the temperature of the different rooms or compartments, as there is only one valve on the radiator to manipulate—the inlet valve, the return end being automatically controlled.

- Finally, it is simple and economical to operate.

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COLUMBIAN ENAMELING & STAMPING CO., Terre Haute, Ind.

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Extended Groups of Buildings

WHEN a number of buildings are heated from the same power plant, the application of certain methods and additional apparatus, which we designate as the Webster Hylo Vacuum System, enables the degree of vacuum to be controlled for each building, so that the vacuum is "balanced" between the points far away and those which are nearer the vacuum pump. This prevents short-circuiting, which would otherwise occur, and assures perfect circulation to the most distant points.



* ERLANGER COTTON MILLS, Lexington, N. C.

J. E. Sirrine
Architect and Mill Engineer

Poe Hardware & Supply Co.
Heating Contractors

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WATKINS MEDICAL CO., Winona, Minn.

Also plant at Memphis, Tenn.

G. W. Mahr
Architect

Lewis & Kitchen
Consulting Engineers

Geo. A. Kees Domestic Eng. Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

When No Exhaust Steam is Available

WHEN power and lighting service is furnished from outside sources, or generated by water power, the usual practice is to install heating boilers to furnish live steam for heating and in some instances for manufacturing processes.

The Webster System can be readily applied to such buildings, either with or without a vacuum pump, depending upon conditions.

When a vacuum pump is used, it is preferable to use the steam-driven type whenever there is sufficient steam pressure available, and such pumps can be had to operate on ten pounds pressure or less. A steam pump costs nothing for power, as the exhaust steam from the pump can and should be used in the heating system.

When steam pumps are not possible, an electrically driven pump of suitable type and capacity can be used.

There are many cases, however, when a special differential type of Webster System can be

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ISAAC A. SHEPPARD & CO., Philadelphia, Pa.

Wm. Steele & Sons Co.
Architects

Machold & Riddell
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

applied, which requires no vacuum pump, especially in plants where it is thought advisable to waste the condensation to the sewer.

The Webster System, for buildings or plants heated by live steam, provides a simple, efficient and economical method of heating.

It has the same advantages as for exhaust steam heating, except, of course, the saving due to the utilization of the exhaust steam.

It assures perfect circulation to all parts of the building or plant, perfect heating efficiency within the individual heating units, absence of air valves and air binding, elimination of noise in the piping, modulation of temperature, saving of condensation, and simplicity and low cost of operation.

Should a power plant be added later, the change can be made to an exhaust steam system with minimum and often nominal expense.

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* JOSEPH CAMPBELL CO., Camden, N. J.

A. Moses
Architect

Chas. Monday & Co.
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Remodeling Heating Systems in Old Buildings

THE owner of a building who has suffered or is suffering the discomforts, inefficiencies and extravagances of an unsatisfactory heating system will of course appreciate the possibilities and advantages of the Webster System, if it will do what we claim for it, far more than the owner who is building his first plant.

A very large part of our business each year comes from such old plants. In fact, it is only in such cases that we can make definite guarantees of saving, since it is often possible to estimate with reasonable accuracy the savings that can be made.

We have frequently guaranteed that the Webster System would pay for itself in from two to four years—a return of 25 to 50 per cent. on the investment.

Our organization of twenty-five branch offices is trained to investigate the operation of heating systems and to advise the owner what advantages and savings the Webster System would show over the system in use.

Our organization is at your service for such investigation. We make no charge for our preliminary investigation or for advising you whether we can improve your conditions.

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



STEVENS-DURYEY CO., East Springfield, Mass.

F. W. Dean, Inc.
Architect and Consulting Engineer

Walworth Manufacturing Co.
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

New Plants

If you are about to erect a new factory building or group of buildings, we trust the claims we have made for the Webster System of Heating will merit your careful consideration.

The fact that the Webster System is being installed in many plants every year to correct troubles in old systems should be proof that it possesses advantages over other methods.

Of the more than 7,000 installations of the Webster System during our twenty-seven years' experience, there have been so few changes (except modernizing of the earlier systems by the use of improvements in our apparatus) that they are negligible. A Webster System continues to be successful because we do not lose interest in the system after it is installed, and the owners are free to consult us whenever, through neglect or change of operating attendants, the operation of the system does not seem to be thoroughly understood.

Our Inspection Service is part of our contract during the initial installation, and is free whenever inspections are made by us on the regular trips of our inspectors.

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



THE LUNKENHEIMER CO., Cincinnati, Ohio

Bert L. Baldwin & Co.
Architects and Consulting Engineers

M. H. Crane Estate
Heating Contractors

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Our Inspection Department is available at any time, however, for special trips, and we charge only for the actual expense and a nominal rate for the time involved, if the trouble is found to be due to failure to operate the system properly.

Our organization, throughout the country, is at your service to co-operate with your architect, consulting engineer or heating contractor in applying the Webster System to your new building.



QUICK MEAL STOVE CO., St. Louis, Mo.

E. C. Jansen
Architect

Sodeman Heat & Power Co.
Constructing Engineers

Jno. B. Materne Mfg. Co.
Heating Contractors

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UNITED STATES MINT, Philadelphia, Pa.

J. Knox Taylor
Supervising Architect

S. Faith & Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Webster Appliances

IT is because of the wide variety of apparatus, from which selection is made to meet the conditions of the plant, plus the "know how" of twenty-seven years' experience, that we are able to successfully meet the problems and conditions that are encountered. The following list shows the diversified line of Webster Appliances for power, heating and ventilating plants:

Automatic Water and Air Relief Traps:

for Coils,
Radiators,
Blast Coils,
Dripping Mains,
Dripping Risers,
Hot Water Generators,
Cooking Apparatus and Dryers,
Manufacturing Apparatus.

Air Separating Tanks

Air Separating Fittings

Atmospheric Relief Valve

Boiler Feeders

Conserving Valves

Damper Regulators

Dirt Strainers

Exhaust Heads

Expansion Joints

Feed Water Heaters

In Standard and Special Design

Feed Water Meters

Gauges and Gauge Boards

High-Pressure Steam Traps

Hylo Apparatus:

Controllers,
Traps,
Gauges

Hydro Pneumatic Tanks

Lift Fittings

Low-Pressure Steam Traps

Modulation Vent Traps

Oil Separators

(For Heating Systems)

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NASHAWENA MILLS, New Bedford, Mass.

C. R. Makepeace
Consulting Engineer

General Fire Extinguisher Co.
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Webster Appliances—*Continued*

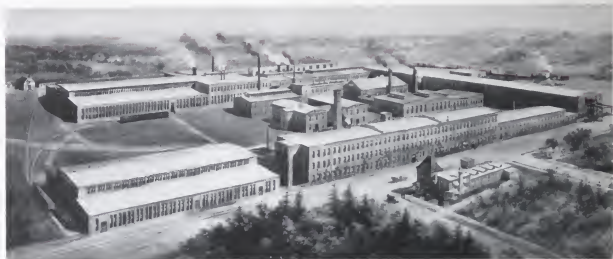
Oil Traps
Preference Tees
Receiving Tanks
Steam Separators
Suction Strainers
Sight Glasses
Thermostatic Traps

Vacuum Oil Separators
Vacuum Breakers
Vacuum Pumps:
 Steam or Electric,
 High or Low Pressure
Vacuum Governors
Vent Valves
Water Line Governors

Modulation Control Valves:
 Standard,
 Special,
 Extended Stems Universal Joint,
 Chain Control
Air Conditioning Apparatus
 Cleansing, Humidifying,
 Cooling, Dehumidifying,
 Reclamation of Materials

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HEATING THE MANUFACTURING PLANT



THE CHAPMAN VALVE MFG. CO., Indian Orchard, Mass.

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

The Webster System is Adaptable to All Types of Manufacturing Plants

This is attested to by the fact that many prominent manufacturers have adopted it.

The following list, arranged according to the character of the product manufactured, represents only a few of the 1,600 and more successful installations of the Webster Vacuum System in Manufacturing Plants:

* Webster Feed Water Heaters also installed.

** Webster Air Conditioning Apparatus also installed.

*** Webster Feed Water Heaters and Webster Air Conditioning Apparatus also installed.

AGRICULTURAL IMPLEMENTS

Avery Company, Peoria, Ill.

*J. I. Case Plow Works, Racine, Wis

Minneapolis Threshing Machine Co., Hopkins, Minn.

John Deere Plow Company, Omaha, Neb.

M. Rumely Co. (Garr Scott Plant), Richmond, Ind.

American Fork & Hoe Company, Frankford, Pa.

AUTOMOBILES

The Studebaker Corporation, South Bend, Ind.

Pierce-Arrow Motor Car Company, Buffalo, N. Y.

Winton Motor Carriage Company, Cleveland, Ohio

Stevens-Duryea Company, Springfield, Mass.

*Hudson Motor Car Company, Detroit, Mich.

The Waverly Company, Indianapolis, Ind.

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BOSCH MAGNETO CO., Brightwood, Mass.
The Holyoke Valve & Hydrant Co.
Heating Contractors



RANDAL PARCHNEY BUILDING, Boston, Mass.
Bradley & Chatman Co.
Heating Contractors

WARREN WEBSTER & COMPANY

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

BAKERS AND CONFECTIONERS

National Biscuit Company, Chicago, Ill.

Also plants at New York (2), Indianapolis, Minneapolis,
Kansas City, Philadelphia, Des Moines, Baltimore
and Cambridge, Mass.

The George H. Strietmann's Son's Co., Cincinnati, Ohio

Also Felbur Biscuit Company Plant, Columbus, Ohio

Perfection Biscuit Company, Fort Wayne, Ind.

Walter M. Lowney Company, Boston, Mass.

Hershey Chocolate Company, Hershey, Pa.

Runkle Brothers, Inc., New York, N. Y.

BOXES

Mengel Box Company, Louisville, Ky.

Also Plants at Winston-Salem, N. C., and Jersey City, N. J.

Kansas City Packing Box Company, Kansas City, Mo.

New England Box Company, Concord, N. H.

Columbus Box Company, St. Louis, Mo.

The Samuel W. Trost Company, Cincinnati, Ohio

Smeed Box Company, Cleveland, Ohio

CAR WORKS

Laconia Car Company, Laconia, N. H.

*Niles Car & Mfg. Company, Niles, Ohio

Pressed Steel Car Company, Pittsburgh, Pa.

The Barney & Smith Car Company, Dayton, Ohio

The Pullman Company, St. Louis, Mo.

American Car & Foundry Company, Berwick, Pa.

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SNELLENBURG BUILDING, Philadelphia, Pa.

William Steele & Sons Co.
Architects and Consulting Engineers

Geo. F. Uber & Co.
Heating Contractors



THE ELECTRIC STORAGE BATTERY CO.
Philadelphia, Pa.

John G. Brown
Architect and Consulting Engineer

Camden Heating Co.
Heating Contractors

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CARRIAGES AND WAGONS

*Kimball Carriage Company, Chicago, Ill.
Parry Manufacturing Company, Indianapolis, Ind.
Winona Carriage Company, Winona, Minn.

Florence Wagon Company, Florence, Ala.
Rauch & Lang Carriage Company, Cleveland, Ohio
*White Hickory Mfg. Company, East Point, Ga.

CLOTHING

A. B. Kirschbaum Company, Philadelphia, Pa.
Kahn Tailoring Company, Indianapolis, Ind.
H. Sonneborn Sons, Baltimore, Md.

P. J. Boland & Co., North Adams, Mass.
Strous Eisendrath & Co., Chicago, Ill.
National Cloak & Suit Company, New York, N. Y.

DRUGS AND CHEMICALS

J. R. Watkins Medical Company, Winona, Minn.
Carter's Ink Company, E. Cambridge, Mass.
The Peruna Company, Columbus, Ohio

Liquid Carbonic Company, Chicago, Ill.
Merck & Co., Rahway, N. J.
*Dr. Kilmer & Co., Binghamton, N. Y.

FURNITURE AND WOODWORKING

Crescent Furniture Company, Evansville, Ind.
*Sheboygan Chair Company, Sheboygan, Wis.
Wabash Screen Door Company, Minneapolis, Minn.

Kertscher & Co., Elmira, N. Y.
E. T. Burrows Company, Portland, Me.
Pfau Mfg. Company, Cincinnati, Ohio

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



LIQUID CARBONIC CO., Chicago, Ill.

Nimmons & Fellow
Architects

John R. Kehm Co.
Heating Contractors



ALBERT PICK, Chicago, Ill.

Alfred S. Alschuler
Architect

A. Kilander & Co.
Heating Contractors

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

HARDWARE

Yale & Towne Mfg. Company, Stamford, Conn.

**Miller Lock Company, Frankford, Pa.

Cassidy Fairbanks Company, Chicago, Ill.

E. C. Atkins & Co., Indianapolis, Ind.

*Sargeant Manufacturing Company, Newark, N. J.

Wyeth Hardware & Mfg. Company, St. Joseph, Mo.

IRON AND STEEL WORKS

*Erie Malleable Iron Company, Erie, Pa.

Cambridge Iron Works, Cambridge, Mass.

Bergen Point Iron Works, Bayonne, N. J.

U. S. Steel Company, Canton, Ohio

Cambria Steel Company, Johnstown, Pa.

Jones & Laughlin Steel & Wire Co., Pittsburgh, Pa.

LEATHER AND TANNERIES

American Hide & Leather Company, Lowell, Mass.

*R. G. & H. B. Good, Newark, N. J.

Bristol Patent Leather Company, Bristol, Pa.

*Alexander Brothers., Inc., Philadelphia, Pa.

*Wilder & Co., Chicago, Ill.

Hurman Zohrlaut Leather Co., Milwaukee, Wis.

Wm. D. Byron & Sons, Williamsport, Pa.

*Harris & Rees Tanning Company, Sylva, N. C.

MACHINERY

*Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

Jones & Lamson Machine Company, Springfield, Vt.

United Shoe Machinery Company, Beverly, Mass.

*Gisholt Machine Company, Madison, Wis.

Kerr Turbine Company, Wellsville, N. Y.

*Singer Manufacturing Company, Elizabethport, N. J.

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DORRIS MOTOR CAR CO., St. Louis, Mo.

J. L. Wees
Architect

Urbauer-Atwood Heating Co.
Heating Contractors



PENN TOBACCO CO., Wilkes-Barre, Pa.

P. P. Lewis
Architect

Allen & Fell
Heating Contractors

WARREN WEBSTER & COMPANY

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THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

METAL GOODS

Aluminum Goods Mfg. Co. of America, Manitowoc, Wis.

Also plants at Two Rivers, Wis., and New Kensington, Pa.

*The Bernardin Bottle Cap Company, Evansville, Ind.

*Plume & Atwood, Waterbury, Conn.

American Can Company, New Castle, Pa.

Also plant at Atlanta, Ga.

*Esterbrook Steel Pen Company, Camden, N. J.

Gorham Manufacturing Company, Providence, R. I.

PAINTS AND VARNISH

Sherwin-Williams Company, Cleveland, Ohio

Also plants at Newark, N. J., and Pullman, Ill.

U. S. Gutta Percha Paint Company, Providence, R. I.

Chicago White Lead & Oil Company, Chicago, Ill.

Glidden Varnish Company, Cleveland, Ohio

*Pratt & Lambert, Inc., Buffalo, N. Y.

Murphy Varnish Company, Chicago, Ill.

PAPER MANUFACTURERS

W. H. McElwain Company, Manchester, N. J.

American Paper Goods Mfg. Co., Kensington, Conn.

S. D. Warren & Co., Cumberland Mills, Me.

National Fibre Board Company, E. Poland, Me.

Androscoggin Pulp Company, S. Windham, Me.

*Champion Coated Paper Company, Hamilton, Ohio

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CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



* SINGER MANUFACTURING CO., South Bend, Ind.

Kehm Brothers Co.
Heating Contractors



E. C. ATKINS & CO., Indianapolis, Ind.

W. H. Johnson & Son
Heating Contractors

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

PLUMBING AND HEATING SUPPLIES

Standard Sanitary Mfg. Company, New Brighton, Pa.	American Radiator Company, Bremen, Ind.
The Lunkenheimer Company, Cincinnati, Ohio	H. B. Smith & Co., Westfield, Mass.
Chapman Valve Mfg. Co., Indian Orchard, Mass.	International Heater Company, Utica, N. Y.

POWER PLANT EQUIPMENT

Kewanee Boiler Company, Kewanee, Ill.	Terry Steam Turbine Company, Hartford, Conn.
H. W. Johns Manville Company, Milwaukee, Wis.	*Ashcroft Manufacturing Company, Bridgeport, Conn.
Ridgway Dynamo & Eng. Company, Ridgway, Pa.	Penberthy Injector Company, Detroit, Mich.

MUSICAL INSTRUMENTS

***Victor Talking Machine Company, Camden, N. J.	Mason & Hamlin Company, Cambridge, Mass.
Rudolph Wurlitzer Company, N. Tonawanda, N. Y.	Steinway & Sons, Long Island, N. Y.
Hallet & Davis Piano Company, Neponset, Mass.	Adam Schaaf, Inc., Chicago, Ill.

PRINTING AND LITHOGRAPHING

The U. S. Lithograph Company, Norwood, Ohio	John C. Winston Company, Philadelphia, Pa.
Also plant at Elizabethport, N. J.	Trow Directory Pub. & Binding Co., New York, N. Y.
National Blank Book Company, Holyoke, Mass.	Smith Brooks Printing Company, Denver, Col.
Con. P. Curran Printing Company, St. Louis, Mo.	

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



ROOKWOOD POTTERY, Cincinnati, Ohio

Elzner & Anderson
Architects and Consulting Engineers

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

RAILWAY EQUIPMENT

American Locomotive Company, Providence, R. I.
Also office building at Schenectady, N. Y.

Union Switch & Signal Company, Swissvale, Pa.

*Hall Switch & Signal Company, Garwood, N. J.

Cleveland Frog & Crossing Co., Cleveland, Ohio

*Railway Steel Spring Company, Oswego, N. Y.

Also mills at Depew, N. Y., Hudson, N. Y., Detroit,
Mich., and E. St. Louis, Ill.

St. Louis Frog & Switch Company, St. Louis, Ill.

RUBBER GOODS

Goodyear Tire & Rubber Company, Akron, Ohio

U. S. Rubber Company, New York, N. Y.

*Boston Rubber Shoe Company, Boston, Mass.

Marion Insulated Wire & Rubber Co., Marion, Ind.

Hartford Rubber Works Company, Hartford, Conn.

Ajax Grieb Rubber Company, Trenton, N. J.

BOOTS AND SHOES

Regal Shoe Company, Whitman, Mass.

Emerson Shoe Company, Rockland, Mass.

Douglas Shoe Company, Mantello, Mass.

*Johansen Brothers Shoe Company, St. Louis, Mo.

*Roberts-Johnson & Rand Shoe Co., Jerseyville, Ill.

Geo. F. Baker Shoe Factory, Brooklyn, N. Y.

STOVES

Walker & Pratt Mfg. Company, Watertown, Mass.

Globe Stove & Range Company, Kokomo, Ind.

Isaac A. Sheppard & Co., Philadelphia, Pa.

Great Western Stove Company, Leavenworth, Kan.

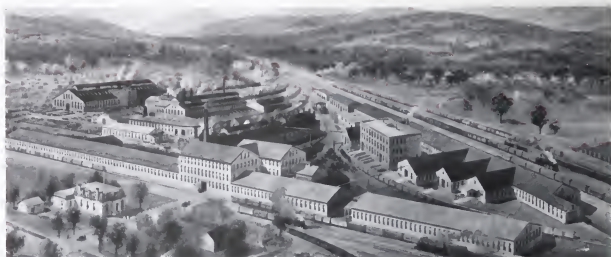
*Quick Meal Stove Company, St. Louis, Mo.

Dangler Stove Company, Cleveland, Ohio

WARREN WEBSTER & COMPANY

CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



* THE HOWE SCALE CO., Rutland, Vt.

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

COTTON GOODS

- *Exposition Cotton Mills, Atlanta, Ga.
- *Chiquola Mfg. Company, Honea Path, S. C.
- *Woodside Cotton Mills, Inc., Greenville, S. C.

- *Caleb J. Milne Company, Philadelphia, Pa.
- *Grosvenor-Dale Co., N. Grosvenordale, Conn.
- *Massachusetts Cotton Mills, Lowell, Mass.

YARNS

- *Wolstenholme & Clarke, Philadelphia, Pa.
- A. J. Cameron & Co., Philadelphia, Pa.
- Nyanza Mills, Woonsocket, R. I.

- Morowebb Cotton Mill Company, Dallas, N. C.
- *Coosa Mfg. Company, Piedmont, Ala.
- *Whittier Mills, Chattahoochee, Ga.

WOOLEN GOODS

- *Montrose Woolen Company, Woonsocket, R. I.
- *Farr Alpaca Company, Holyoke, Mass.
- S. Slater & Sons, Inc., Webster, Mass.

- Empire Worsted Mills, Jamestown, N. Y.
- Fern Rock Woolen Mills, Philadelphia, Pa.
- *Atlanta Woolen Mills, Atlanta, Ga.

WARREN WEBSTER & COMPANY

CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



BULLOCK ELECTRIC MANUFACTURING CO., Norwood, Ohio

Bert. L. Baldwin & Co.
Architects and Consulting Engineers

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

CARPETS, RUGS AND BLANKETS

McCleary, Wallin & Crouse, Inc., Amsterdam, N. Y.

Thomas Boggs & Sons, Philadelphia, Pa.

Firth Carpet Company, Firthcliffe, N. Y.

*J. Capps & Sons, Jacksonville, Ill.

*Dickey & McMaster, Philadelphia, Pa.

Wallace & Smith Company, La Porte, Ind.

SILKS

*Schwarzenbach, Huber Co., W. Hoboken, N. J.

Also plants at Bayonne, Sterling, Union Hill, and Juniata,
Altoona, Pa., and Front Royal, Va.

*Cheney Brothers, Inc., S. Manchester, Conn.

*Bamford Brothers Silk Mfg. Company, Paterson, N. J.

*The Baer Company, Berwick, Pa.

Also plant at Lehighton, Pa.

**Sauquoit Silk Mfg. Company, Philadelphia, Pa.

R. & H. Simon, Easton, Pa., and Union Hill, N. J.

KNITTING

*Richmond Hosiery Mills, Rossville, Ga.

Vassar Swiss Underwear Company, Chicago, Ill.

*Leicester Knitting Mills, Woonsocket, R. I.

Century Knitting Company, Spring City, Pa.,

and Pottstown, Pa.

*John K. Stewart & Sons, Inc., Amsterdam, N. Y.

*Wiscasset Mills Company, Albemarle, N. C.

Durham Hosiery Mills, Durham, N. C.

Also plant at High Point, N. C.

*P. H. Hanes Knitting Mills, Winston-Salem, N. C.

WARREN WEBSTER & COMPANY

CAMDEN, N. J.

HEATING THE MANUFACTURING PLANT



A. SCHRADER'S SON, Inc., Brooklyn, N. Y.

Howard Chapman
Architect

Lawrence Tiny and W. F. Crane & Co.
Heating Contractors



NATIONAL BISCUIT CO., New York City

A. G. Zimmerman
Architect

Pattison Brothers
Consulting Engineers

Baker, Smith & Co.
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

TOBACCO

Penn Tobacco Company, Wilkes-Barre, Pa.
Blackwell-Durham Tobacco Company, Durham, N. C.
G. W. Van Slyke & Horton, Inc., Kingston, N. Y.
H. Fendrick, Evansville, Ind.

*R. J. Reynolds Tobacco Co., Winston-Salem, N. C.
Also plants at Salem, N. C., Lexington, Ky., and
Danville, Va.

*Block Brothers Tobacco Co., Wheeling, W. Va.

TOOLS

Kempsmith Mfg. Company, W. Allis, Wis.
Gisholt Machine Company, Madison, Wis.
Fayette R. Plumb, Philadelphia, Pa.

Goodell Pratt Company, Greenville, Mass.
Electro Dental Mfg. Company, Philadelphia, Pa.
Milwaukee Machine Tool Co., Milwaukee, Wis.

WIRE

Hazard Mfg. Company, Wilkes-Barre, Pa.
The W. I. Tyler Wire Works, Cleveland, Ohio
Phillips Insulated Wire Company, Pawtucket, R. I.

Lloyd Mfg. Company, Minneapolis, Minn.
*DeWitt Wire Cloth Company, Belleville, N. J.
*Wire Goods Company, Worcester, Mass.

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



* MASSACHUSETTS COTTON MILLS No. 12
Lowell, Mass.



MASSACHUSETTS COTTON MILLS, (Storehouse)
Lowell, Mass.

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Webster System Installations in Various Types of Buildings

WHILE it is the purpose to describe herein the advantages to be secured by the installation of the Webster Vacuum System of Steam Heating in Manufacturing Plants, attention is called to the fact that the Webster System is installed in buildings of diversified character with equally as good results.

As the number of Webster Vacuum System Installations is over 7,000, this list is therefore not complete:

Agricultural Implement Manufacturers.....	34	Central Heating Plants (three or more buildings heated from one source)	529
Automobile and Carriage Manufacturers	48	Clothing and Wearing Apparel Manufacturers...	15
Asylums, Hospitals, Institutions and Sanitariums.	355	Clubs and Secret Societies	37
Bakers and Confectioners	53	Churches, Convents and Religious Institutions...	149
Brewers and Distillers	11	Colleges, Schools and Universities	545
Brick and Pottery Manufacturers	17	Cordage Manufacturers	6
Builders' Materials and Supplies	67	Department Stores and other large Retail Stores...	113
Cash Register Manufacturers	1	Drugs and Chemical Manufacturers	27
Catholic Institutions	125		

WARREN WEBSTER & COMPANY

CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



WARD BREAD CO., Brooklyn, N. Y.

C. B. Comstock
Architect and Consulting Engineer

E. Rutzler Co.
Heating Contractors



* ST. PAUL BREAD CO., St. Paul, Minn.

C. B. Comstock
Architect

Hankee & Eha
Heating Contractors

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Electric Railway Buildings	28	Railroad Supplies Manufacturers	12
Electric Supplies Manufacturers	29	Railroad Shops and Freight Stations	77
Foodstuffs and Grocery Manufacturers	48	Railroad Terminals and Offices	63
Foundries, Iron and Steel Works	93	Restaurants	7
Furniture and Wood-Working Plants	136	Rubber Goods Manufacturers	25
Greenhouses and Nurseries	16	Sewing Machine Manufacturers	7
Hardware and House Furnishings Manufacturers	85	Shirt Manufacturers	9
Hotels and Apartment Houses	373	Shoe Manufacturers	66
Jewelry Manufacturers	13	Soap Manufacturers	9
Libraries	24	Stationery and Office Supplies Manufacturers	8
Machinery Manufacturers	147	Tanneries and Leather Goods Manufacturers	54
Metal Goods Manufacturers	132	Telephone and Telegraph Companies' Buildings	21
Mining Companies' Buildings	95	Textile Mills	319
Municipal, County and State Buildings	436	Textiles (Slasher Equipment in Cotton Mills)	62
Office and Business Buildings, including Banks	603	Theatres and Amusements	48
Optical Goods and Cameras	3	Tobacco Manufacturers	20
Paint and Varnish Manufacturers	45	U. S. Government Buildings, including two Mints	57
Paper Products	62	Watch Manufacturers	4
Penitentiaries and State Prisons	33	Y. M. C. A. and Y. W. C. A. Buildings	36
Piano and Musical Instrument Manufacturers	18		
Printers and Publishers	73		

WARREN WEBSTER & COMPANY CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



NATIONAL BISCUIT CO., Minneapolis, Minn.



NATIONAL BISCUIT CO., Kansas City, Mo.

A. G. Zimmerman
Architect

A. McKinley Heating Co.
Heating Contractors

WARREN WEBSTER & COMPANY

CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

Webster Air Conditioning Apparatus

IT is of the utmost importance that the manufacture of various products be carried on under the most favorable conditions. Nearly every process of manufacture may be facilitated in one way or another by the use of "Webster" Air Conditioning Apparatus. Increased efficiency of labor due to the installation of an adequate ventilating system providing a continuous supply of fresh pure washed air is generally conceded.

Manufacturers of food products or materials of delicate nature will find the installation of a "Webster" Air Conditioning Apparatus admirably adapted for improvement of the quality of their goods.

In the achievement of perfect sanitation in the great food kitchens, the purity of the air supply cannot be overlooked.

In painting, varnishing and finishing shops the advantage of pure air for drying purposes is evident.

WARREN WEBSTER & COMPANY

CAMDEN N.J.

HEATING THE MANUFACTURING PLANT



THE GEORGE H. STRIETMANN'S SONS CO.
Cincinnati, Ohio

G. W. Drach
Architect

W. G. Franz
Consulting Engineer

M. H. Crane Estate
Heating Contractors



* ORLEANS MANUFACTURING CO., New Orleans, La.

DeBuys, Churchill & Labouisse
Architects

H. N. Moody
Heating Contractor

WARREN WEBSTER & COMPANY CAMDEN N.J.

THE WEBSTER VACUUM SYSTEM OF STEAM HEATING

In numerous industries the maintenance of uniform atmospheric conditions is essential to continuous production.

Textile, lithographic, moving picture and photographic film, low temperature drying, and in many other industries the maintenance of the proper temperature and humidity of the air, overcomes troubles from static electricity, promotes or retards chemical or physical action within the materials and facilitates the process of manufacture. The proper application of a "Webster" Air Washer will reclaim valuable materials or remove dust nuisances from exhaust systems.

The field of Air Conditioning engineering is marvelously broad and varied, affording many opportunities, and the experience of our experts, who have made this field their life study, is at your service for the solution of your problems.

WARREN WEBSTER & COMPANY

CAMDEN N.J.

HEATING THE MANUFACTURING PLANT

The Webster Organization

THE service rendered architects, engineers, contractors and owners in connection with the installation of the Webster Systems of Steam Heating, Webster Feed-Water Heaters and Webster Air-Conditioning Apparatus is made possible by our very complete organization. During the twenty-seven years of our business existence men have been trained in our particular line and have been located in the larger cities of the United States and Canada, so that to-day we are in a position to give expert and prompt attention, not only to inquiries, but to actual installations as well.

BRANCH OFFICES AND REPRESENTATIVES IN THE FOLLOWING CITIES

New York
Charlotte
Houston
Spokane

Philadelphia
Cincinnati
New Orleans
Denver

Chicago
Indianapolis
Minneapolis
Wilkes-Barre

Boston
Cleveland
San Francisco
Washington

Pittsburgh
St. Louis
Los Angeles
Saginaw

Atlanta
Kansas City
Seattle

Sole Representatives and Manufacturers for Canada, DARLING BROTHERS, Limited
Montreal St. John Toronto Winnipeg Vancouver Calgary London, Ont.

THE ATMOSPHERIC STEAM HEATING CO., Ltd.
London, Eng.

WARREN WEBSTER & COMPANY

CAMDEN N.J.



